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Ownership and Corporate Control in Poland

Why State Firms Defied the Odds

Brian Pinto
Sweder van Wijnbergen

Survey results in Poland indicate that hard budgets and import competition can spur state firms to adjust even when privatization lags behind. But why did state enterprise managers instigate such adjustment?

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Summary findings

Survey results in Poland indicate that hard budgets and import competition can spur state firms to adjust even when privatization lags behind. As they examine the underpinnings of Polish reform, Pinto and van Wijnbergen address the key question of why managers instigated such adjustment.

They examine how corporate ownership and control influence the behavior of state firms, as illuminated by the following survey findings and conclusions:

- Contrary to expectations, state firms took painful adjustment measures. Enterprise managers firmly believed that privatization was coming. This belief led them to manage better, not worse; a private-sector-based economy means a market for managers and a premium on skilled management.
- The excess wage tax (the much-criticized "Popiwek" scheme) did restrain wage-setting behavior, judging from the wage-setting equations presented by Pinto and van Wijnbergen.
- Essential to the good performance of state industries is an end to open-ended subsidies. Subsidies, rather than helping firms adjust, give them incentives to continue their past behavior and destroy any mechanism of control other claim-holders might have.
- Commercial banks, the Polish experience shows, can be made to exercise governance over state firms. Without effective takeover mechanisms, withholding funds is their most powerful instrument. That instrument is made powerless if firms, pressured to adjust by banks, can turn to the government themselves. Banks themselves started to respond appropriately — and to play a powerful role in disciplining enterprises — only after their own governance and control/incentive mechanisms had been reformed as part of the banking reforms of the fourth quarter of 1991.

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Ownership and Corporate Control in Poland: Why State Firms Defied the Odds

by

Brian Pinto
International Finance Corporation

and

Sweder van Wijnbergen
University of Amsterdam,
LSE and CEPR

This paper expresses our personal views and does not necessarily reflect the views of the institutions we are affiliated with. We are indebted to Sanjay Shah for excellent research assistance and to Mariusz Sumlinski for help with the data. The paper draws on a survey conducted over the years 1990-1992 by the first author, M. Belka and S. Krajewski. We furthermore want to thank seminar participants at Harvard University, The International Monetary Fund, The London School of Economics, New York University, Oxford University and The University of Michigan for helpful comments. Last, but not least, we gratefully acknowledge financial support from the World Bank through RPO 67825.

1 Introduction

When Eastern Europe opened up in 1990, there was widespread agreement that the existing State Owned Enterprises (SOEs) were doomed. Some claimed they were actually value-subtracting and would be wiped out by trade liberalization (McKinnon (1993)). While this extreme view had little basis in fact, most would have agreed with the view expressed in van Wijnbergen (1991): " After the crumbling of central authority that used to exercise both ownership and control, ownership of SOEs remains ineffective and control diffuse. (...) [W]ith changes in ownership announced but not implemented, managers and workers councils alike have every incentive to decapitalise the enterprise and increase its debts". Similar misgivings were expressed in Lipton and Sachs (1990 a,b) and Frydman and Wellisz (1991).

While this may be a reasonable description of what is now going on in the Former Soviet Union, the SOEs in most of Central Eastern Europe (CEE) have done much better than predicted. Poland grew faster than any country in Europe in 1993, at least partly because its state enterprise sector put in a robust performance after the decline in 1990 and 1991. Exports to the West shot up, mostly because SOEs successfully sought new export markets after the collapse in internal demand in 1990 and the demise of CMEA trade in 1991: and industrial production, almost 70 percent of which came from SOEs, grew at 4 percent in 1992 and 5.6 percent in 1993 (GUS Statistical Bulletin, various issues) with prospects of 6-7 percent for 1994.[1] This raises what is in our view the most intriguing question posed by Poland's growth experience: how come the state sector has defied the odds and not collapsed? It is no surprise that the new private sector is growing at breakneck speed; but given the incentive problems and poor governance in the SOEs, why did the disaster that was widely predicted in the early reform years not materialize?

There is remarkably little empirical work to base an answer on. Most of the survey work has been focused on the rapidly growing private sector (cf Webster (1992) for interesting examples). While that focus is understandable, it is no great surprise that private enterprises are growing fast, difficult circumstances notwithstanding. The service sector, which is where most of private enterprises are starting up, was largely neglected under the communist regimes, by and large requires little up front capital outlay and faces a huge demand. Much more intriguing is the question why, given the incentive problems and lack of corporate control mechanisms rightly pointed out in the early literature, state industries seem to be recovering in much of Central and Eastern Europe (CEE). This is the question we address.

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[1] Aggregate statistics do show a shrinking state sector in 1993. This is however partly because of privatization and partly because of asset sales by SOEs to private operators. There is a growing body of survey evidence showing that SOEs are turning around. See Hume and Pinto (1993) for examples.

Rather than cover all of CEE, we take an in-depth look at the most spectacular example, Poland.[2] The first author conducted a series of firm-level interviews over 1991 and 1992 while at the World Bank office in Warsaw. The resulting panel data set sheds a fascinating light on this question[3]; the answers have, in our view, great significance for those countries that are now where Poland was three years ago.

Pinto et alii (1993) provide survey results indicating that hard budgets and import competition can spur state firms to adjust even when privatization lags behind. Our discussion goes to the key question of why managers instigated such adjustments as we examine the micro-underpinnings of the Polish reform. We examine the influence of corporate ownership and control on SOE behavior as illuminated by four key results from the survey evidence. First, contrary to expectations, SOEs did take painful adjustment measures: second, we present both econometric evidence and direct survey results indicating that the excess wage tax restrained wage setting behavior. Third, we show that banks played a powerful role in disciplining enterprises, but only did so after their own governance was reformed in the banking reforms of end-1991. Finally we present intriguing and encouraging evidence on the incentive effects for managers of future privatization plans. Shleifer (1993) questioned whether the budget constraint imposed on Polish enterprises was indeed hard. This paper provides important insights into the hardening of the budget constraint and the credibility of the reforms as seen through the eyes of state firm managers.

In what follows we first document the adjustment that has taken place in the SOE sector in Poland drawing on the survey evidence (section 2). In section 3 we provide econometric evidence on the extent to which the various claim holders (the government, banks and suppliers) have exercised governance. Section 4 directly addresses the issue of management incentives: was there more than direct pressure from claim holders that led managers to restructure firms and focus on efficiency? And Section 5 concludes.

2 State Enterprise Adjustment in Poland

In this section, we first present a sketch of the background against which the SOEs functioned (Section 2.1); the second part of the section documents the adjustment that has taken place in the SOEs drawing on our survey evidence (Section 2.2).

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[2] An early paper on incentive issues in the Polish context is Frydman and Wellisz (1991). Other relevant referencesare Dabrowski et alii (1991); Pinto et alii (1991).Schaffer (1992). Fan and Schaffer (1993) and in particular Gomulka (1993).

[3] See Pinto et alii (1993) for a detailed description of the survey and a preliminary analysis; a short description of the enterprises covered is given in Annex 1 to this paper.

2.1 *Background*

For those unacquainted with the details of the Polish reform, we summarize here the four key events impacting state firms and their timing. The first was the "big bang" itself, which occurred on January 1, 1990; the second was the collapse of the trading arrangements between the former Soviet Union and its satellite states (CMEA trade) at the start of 1991; the third was the first devaluation of the Polish zloty during the reforms in May 1991 (almost 17 months after the big bang) and the switch to a crawling peg in October 1991; the fourth were the banking reforms of end-1991, whereby the commercial banks spun off from the National Bank of Poland (the socialist era mono-bank) were brought under direct control of the Ministry of Finance and a scheme for dealing with bad loans was initiated. A thumbnail sketch of evolving enterprise issues is as follows: in 1990, the big surprise was that SOEs did not go bankrupt, in spite of the rigors of hard budgets and liberalized imports that accompanied the big bang, which led to a big sales decline. Following the collapse of CMEA trade in 1991, the enterprise sector went deep into recession and Poland seemed headed for a high-inflation collapse; but following the changes in the exchange arrangements mentioned above, a sales recovery was observed in late 1991, which has pretty much continued unabated since. Throughout, what exactly transpired at the firm-level has been a mystery.[4]

Polish SOEs were starting from non-market initial conditions of no price competition, production targets and state distribution systems. The "big bang" substantially freed prices, raised real interest rates to *ex ante* positive levels and introduced import competition by slashing tariffs and making the zloty convertible for trade and internal portfolio transactions. Overnight, SOEs had to deal with a new economic system without prior training, and managers felt overwhelmed by the kaleidoscope of changes they had to deal with.

With zero unemployment in socialist Poland, hence overstaffed SOEs, one would expect the hard budgets and import competition to induce labor shedding. Further, since pre-reform relative prices were irrelevant and quality did not matter in the old, scarcity-plagued regime, one would expect companies to focus on cost efficiency and product-mix improvements in the new environment. Lastly, with macro stringency leading to depressed domestic demand and shrinking real wages (partly engineered by the excess wages tax), SOEs could improve their chances of survival by exporting. We examine these aspects of adjustment in Section 2.2.

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[4] Details on these key events may be found in Pinto et alii (1991, 1993) and Schaffer (1992). Balcerowicz (1993) and Bruno (1992) discuss factors impinging on the design of the reforms.

2.2 *State Enterprise Adjustment*

The adjustment evidence presented here is based on a direct survey of 75 large SOEs picked from the Lista 500, Poland's version of the Fortune 500. Our reason for restricting attention to large state companies is that these companies were expected to be the most resistant to reform. The enterprises were visited twice, once in mid-1991 and once in mid-1992. The data obtained cover the period June 1989-June 1992, six months before the big bang of January 1, 1990, and 30 months into the reforms. The 64 enterprises responding to the repeat survey were classified into three groups depending upon their financial performance in 1992: AAA connoting positive retained earnings after paying all taxes; AA connoting positive pre-income tax profit but negative retained earnings; and A connoting negative pre-income tax profit, i.e., loss-making enterprises.[5] There turned out to be 31 AAA firms, 8 AA firms and 25 A firms. We focus on the AAA and A firms in our attempts to discover differences in response and the impact of governance. Annex A contains details on sample selection and the data collected.

Labor Shedding and Unit Labor Costs

Table 1 shows that in the sample as a whole, labor was reduced by a phenomenal 27 percent between December 1989 and June 1992. What is even more interesting is that the least profitable firms shed the most labor. This makes economic sense, but clearly contradicts the standard view on the modus operandi of state enterprises in post-communist Europe.

Table 1: Index of Employment (September 1989=100)

	Dec-89	June-90	Dec-90	June-91	Dec-91	June-92
AAA	101.7	95.1	93.4	87.4	84.4	79.4
AA	99.7	98.7	95.2	87.3	78.5	76.5
A	100.1	95.9	88.5	81.9	74.0	67.1
TOTAL	100.8	95.8	91.3	84.7	78.8	73.2

Real sales also fell after the big bang in 1990. There was an immediate and abrupt contraction in output and thereafter some recovery after mid-year, but 1990 ended with a 12 percent decline in GDP.

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[5] The standard way of classifying enterprises is by industrial sector, i.e., chemicals, engineering, food processing, etc., but this is not very illuminating when studying adjustment.

For the sample firms, sales dropped sharply in the beginning of 1990, but have exhibited different patterns since. Sales of AAA firms started rebounding in April 1991 and have been on an uptrend since. But sales of A firms have been in decline throughout.

Labor shedding has salvaged productivity somewhat. Between September 1989 and June 1992, AAA firms suffered a marginal decline of 3 percent in productivity, while it plummeted 40 percent for A firms. These differences are reflected in unit labor costs. Real wages rose rapidly in the last quarter of 1989, as firms believed year-end wages would form the basis for wage increases after the big bang; but there was also a boom in sales, keeping unit labor costs in check.[6] The big bang brought with it a big jump in materials and energy prices and a three-fold increase in interest rates, which ranged from 50 to 72 percent for the month of January 1990 alone. Firms had no option but to freeze nominal wages. Real wages plunged, and so did unit labor costs. Subsequently, these rose as real wages recovered; but have been going down since mid-1991 as labor cuts have continued in the face of stabilizing or rising sales. AAA firms have done much better than A firms on this score, as Figure 1 attests.

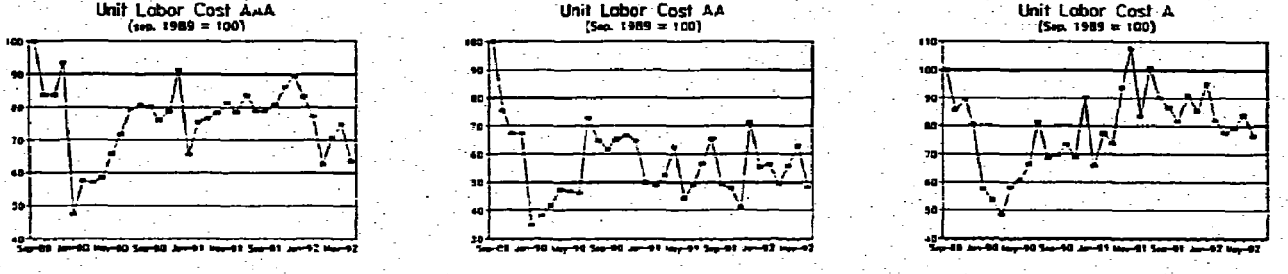

Figure 1: Unit Labor Costs.

Cost Control and Product Mix

Under the auspices of CMEA trade that existed among the Soviet Union and its satellite states, Poland was a net importer of energy and raw materials and an exporter of electromechanical and consumer goods that did not meet world quality standards. SOEs benefited from the persistence of CMEA trade in 1990, which to some extent cushioned the price impact of the big bang and permitted a slower

[6] This boom, and the hyperinflation during the last quarter of 1989 is ascribed to a spending spree by households in anticipation of the price rises expected at the start of the reform program in 1990.

increase of materials and energy prices.[7] As Table 2 demonstrates, all three groups of firms had roughly the same level of energy and materials costs in 1990; the price impact of the collapse of the CMEA (switching from administered transferable ruble prices for energy and raw materials prices in 1990 to international dollar prices in 1991) shows up in the numbers for the first half of 1991 for AAA firms. By the first half of 1992, both AAA and A groups exhibit increased efficiency in materials and energy use, even compared to the implicitly subsidized numbers of 1990. In fact the decline in the share of materials and energy costs even in the face of a clear relative price increase of in particular energy (relative to output prices) is impressive testimony to the extent of adjustment that took place. Interestingly, A firms on average have no difficulty covering variable costs, suggesting that their travails may be due more to excess labor and the debt overhang, and that with downsizing and restructuring, these firms could have potential.

Table 2: Materials and Energy Costs to Sales (%)

	1990	1991 (1-6)	1991 (1-12)	1992 (1-6)
AAA	52	58	50	45
AA	47	60	61	50
A	48	47	45	39

When asked to rate the importance of product mix changes as a factor stimulating increased production on a zero-to-five scale, AAA firms averaged 3.2, while A firms averaged 1.5.

Export Behavior

One of the stellar achievements of the Polish economy in 1990 was the huge increase in hard currency exports to the west. Hard currency exports grew by some 40 percent at the same time that total industrial sales fell by 23 percent and CMEA exports shrank by 10 percent. These aggregate numbers strongly suggest a diversion of sales from the home and CMEA markets to the west, indicating that SOEs

[7] For example, at the start of the Gulf Crisis in 1990, Poland was importing oil from the Soviet Union at $ 3 per barrel compared to a world price of $ 25. Table 5 in Kharas (1991) contains other telling examples of implicit subsidies.

were nimble-footed enough to quickly re-orient the direction of their sales.

While this re-orientation implied a certain adjustment, it did not necessarily mean that exporting firms had adjusted better in other ways, such as cost control, labor shedding or new product development. The 1990 hard currency boom coincided with the persistence of CMEA trade with its implicit input subsidies. It was the most prominent in the chemicals and metallurgical sectors, which benefited from cheap energy (gas) and materials (iron ore). The liberalization of trade with the west combined with a big depreciation of the zloty/dollar rate compared to the zloty/transferable rate vastly increased the relative profitability of securing inputs from the east and selling to the west.

This can be seen from a simplified profit function for exports to the west: profit ($) per unit of exports = $p_x - p_m (m/E)$, where p_x is the (sticky) dollar price of unit exports to the west, p_m is the (sticky) ruble price of imports, m is the volume of imported CMEA inputs per unit of exports (fixed by short-run technology) and E is the implied TR/dollar rate. E went from 2.97 TR/dollar in 1989 to 4.52 TR/dollar in 1990, greatly increasing profits.

It is therefore tempting to believe that firms that could, based on existing technology and product quality, diverted sales *en masse* to the west in 1990 without waiting for the 1991 CMEA collapse. This view was tested by asking the managers of the chemicals and metallurgical firms, the two sectors where the 1990 export boom had been the most prominent, the following questions: First, did the hard currency export boom to the west consist of the identical products sold earlier in the home and CMEA markets, or of new products? Second, did firms that could, divert sales immediately in 1990 without waiting for the 1991 CMEA collapse? The results shown in Table 3 indicate that the answer to both questions was a resounding "yes". Certainly, managers took the initiative and sold to the west, and this is commendable, even though they confirmed that the products were essentially the same and that implicit CMEA input subsidies made a big difference. The following answers were obtained:

Table 3: 1990 Export Boom

Answer	% of Total Exports Involved[1]
The same product	91
Diversion in 1990	89

1/ Total exports refer to the 1990 exports of the firms polled.

Investment Behavior

An enduring fear has been that worker-controlled SOEs would decapitalize companies by paying out all surpluses in wages. This fear has been justified by appealing to the governance of companies (worker-controlled firms with "no advocate for capital") and the assumed myopia of workers.

We set up a direct test for decapitalization, defined simply as investment being less than depreciation. What is the relationship between investment, depreciation and profitability at the firm-level? Do more profitable firms invest more? And in cases where investment does exceed depreciation, does profitability play a positive role? Or is there no obvious link with profitability? If more profitable firms do invest more relative to depreciation, then one can conclude that any observed decapitalization is really a part of the normal adjustment one would expect to the change in economic regime, rather than a deliberate squandering of state assets. The following equation was estimated:

$$\text{Inv/Dep} = f(\pi)$$

where Inv is investment, dep is depreciation and π is profit margin. To see whether one can find changing patterns as incentives changed, we ran separate cross-section regressions for 1989, 1990, and 1991.

$$\left(\frac{INV}{DEP}\right)_i = \alpha + \beta PRF_i + \epsilon_i$$

Table 4

	1989		1990		1991	
	Estimate	t stat	Estimate	t stat	Estimate	t stat
α	8.346	3.76	0.936	2.297	1.008	7.28
β	-10.29	-1.21	2.422	1.278	1.590	1.92

The regressions sketch an interesting pattern: while investment (scaled by depreciation) is a negative function of profitability in the last year of the old regime (1989), the coefficient on profitability turns positive in 1990 and 1991. And in the last year the relevant coefficient is almost significant at the standard 5% test size (1.92 instead of 1.96). This provides an indication ti justment did take place in sensible directions: expansion took place in the more profitable firms.

Wage Setting Behavior

Did wages consume all the surplus, or are there signs of restraint? Figure 2 shows the share of wage costs (basic wages plus payroll taxes and social insurance contributions) in a measure of gross value-added (GVA, equal to profits before tax plus wage costs plus depreciation).

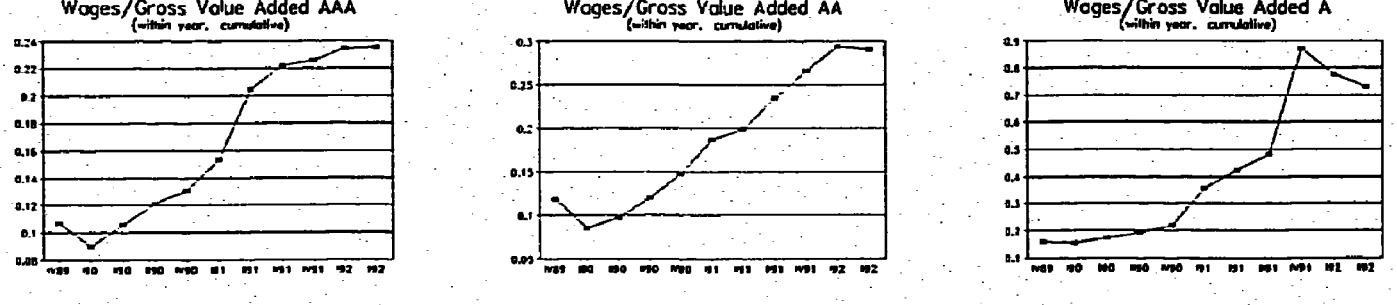

Figure 2: Wages/Gross Value Added

In interpreting the graphs, it should be remembered that GVA was artificially high to start with owing to implicit CMEA subsidies in 1990. Further, there was a huge compression in wages after the big bang to offset higher input costs and interest rates. After the fear of bankruptcy had subsided around mid-1990 and macro policy was loosened, wages grew rapidly, partly to compensate for the initial

shrinkage in the real wage.[8] What the graphs show is that after rising, the share of wages stabilizes for AAA firms at around 23 percent and actually falls for A firms after consuming virtually all the GVA initially. For AAA firms, wages were far from consuming all of GVA. The unprofitable A firms came close to this; but this was more due to the compression of GVA than prodigality in setting wages. The rise in the ratio of wages to GVA in A firms took place in spite of sharp cuts in labor (recall Table 1) and wage payments that were well below those in AAA firms (Table 5).

Table 5: Measures of Wage Restraint

	Category	1990	1991	1992
Average monthly wage	AAA	1060	1779	2196
(thousands of zlotys/ worker)	AA	1204	1464	2004
	A	933	1517	1802
PPWW to Disposable Cash (whole	AAA	9.8	18.5	7.9
period) (%)	AA	12.1	20.0	1.9
	A	7.1	-11.5	-4.0
PPWW per worker (whole period,	AAA	3655	6500	1635
thousands of zlotys)	AA	5675	4740	219
	A	1319	1518	256

Another measure of restraint, shown in Table 5, is based on the excess wage tax. The excess wage tax, better known by its Polish acronym, PPWW, was adopted as one of the nominal anchors designed to kill hyperinflation at the start of the reform in January 1990. It was designed as a punishing, progressive tax on wage increases above norm wages. The highest marginal rate was initially set at 500 percent, but was subsequently lowered to 400 percent and then 300 percent. Table 5 shows the share of the excess wage tax payment in disposable cash, defined as profits before tax minus income tax -

[8] Discussions of wage setting in 1990 are contained in Pinto (1992) and Schaffer (1992).

dividends plus depreciation.[9] The fact that a relatively small share of disposable cash was devoted to PPWW (the table is based on PPWW accrued) is a definite sign of wage restraint. The table is also interesting in that most PPWW payments were incurred by profitable firms. PPWW payments increased sharply in 1991 (but not that dramatically in real terms - inflation was about 70% percent). This may partly be due to the shift from a wage bill to an average wage norm in 1991, which meant that as workers were shed, firms would have to pay the PPWW even if the total wage bill remained constant. In 1992, PPWW per worker fell sharply.

Social Assets

Social assets (hospitals, schools, football stadiums, worker housing) have always been an integral part of socialist firms. The onset of market reforms required that the financial and managerial burden stemming from such assets be addressed.

During the first round of visits in mid-1991, managers complained bitterly about they saw as the overwhelming burden of social assets. No solution seemed to be in sight. It was therefore natural to probe during the second round of visits whether any solutions had appeared. The contrast was refreshing. Managers seemed more comfortable with the problem. In most cases, the ideal solution would be to give away the assets; but this would require establishing ownership and possibly paying gift taxes. Unable to do this, various forms of cost recovery had been developed: schools were handed over to the local authorities; cafeterias had been converted into showrooms; sports stadiums were offered for use to the city, which picks up the operating cost; vacation resorts and worker hotels commenced commercial operation. The big problem of worker housing had been reduced as controlled rents and utilities were raised. Managers had formulated several potential solutions to the worker housing problem, which they were beginning to voice. Thus, while social assets still remained on the books and therefore continued to be a problem, it was a problem being actively addressed.

Distribution

The state distribution network collapsed with the onset of market reforms, creating a gigantic problem for SOEs used to producing without having to bother about sales or marketing. Much progress has been made in this crucial area. Nearly all the sample SOEs had set up marketing departments. The

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[9] The notion of disposable cash is closely tied to the cash constraint indicator derived below in the context of bank borrowings.

number two position, usually given to a production person, was now reserved for the sales or finance director instead.

SOEs have begun establishing direct contact with the ultimate consumers or with retailers. In metallurgy, managers reported that in 1992 over 80% of sales were direct deliveries to the ultimate user, in electromachinery only slightly less. Two years earlier steel mills had only a few customers, sometimes one, who would take care of the whole distribution process, with the producer fully isolated from the market.

In consumer goods sectors such as food processing and light manufacturing, a similar process is under way. Over half of output is sold directly to retailers to avoid wholesalers' commissions and contacts with often unviable and small partners. The best firms are building up their own networks of reliable distributors for wholesaling and storage, sometimes supplemented with factory-sponsored retail shops.

In 1990, over 90 percent of exports by the sample firms were through state-owned foreign trade companies (FTCs). Dissatisfied by high commissions and sometimes inadequate service, SOEs have found alternatives. By 1992, FTCs accounted for just over 50 percent of the exports of the sample firms; 27 percent was sold directly to western clients and 16 percent through new private agents.

Summary of Adjustment

The preceding evidence shows that SOEs have been willing to take painful measures to improve their long-run profitability. The most significant among these has been labor-shedding. The data also support the view that efficiency in materials and energy usage is up, while trends in unit labor costs are encouraging. The more successful firms have experienced a revival of sales and point to the importance of product mix changes. As early as 1990, SOEs proved that they could quickly sense and take advantage of profit opportunities, captured by the immediate and large diversion of sales from the home and CMEA markets to the west. The pressing problem of social assets has also begun to be addressed in a convincing manner, and marketing, the Achilles' heel of SOEs, is improving. These adjustments fly in the face of early predictions regarding SOE behavior, which were based on the view that managers and workers would squander state assets and did not have the incentive or expertise to restructure. We now turn to

3 What made SOEs adjust?

There was every reason to expect destructive management behavior in Poland's SOEs after the collapse of communism in 1990. With Central authority in disarray and in the absence of a centralized treasury, the Government as equity owner was unlikely to be interested in or capable of management control. And corporate debt was typically held in newly-created banks with no experience of Western style banking behavior. Yet by and large the state sector has belied all predictions and adjusted remarkably well to changing circumstances. We saw in the previous section that a survey of SOEs conducted over the period 1990-1993 shows adjustment patterns and management behavior remarkably in line with what one would expect from profit oriented forward looking entrepreneurs.

This immediately raises the question of why managers behaved in the way they did in spite of the absence of regular mechanisms of corporate control and without any a priori obvious incentives to do so. Did any of the formal owners force such behavior onto management, and if so why and how? Or did management respond to incentives that were not obvious to outside observers at the outset?[10] The answers to these questions are of obvious importance to the design and implementation of enterprise and financial sector reform programs.

The starting point of the answer is the ownership structure of the enterprises involved. Except for three privatized SOEs, all enterprises in the sample are state-owned, and only a subset had already been corporatized. Thus the Government was the equity owner, de jure for the corporatized enterprises, and de facto for the rest. At the same time, the government also is the senior debt holder in most enterprises through the existence of tax arrears. Since loss-making enterprises by definition do not pay income tax, those arrears were largely incurred on dividend and Popiwek tax liabilities.

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[10] An early discussion of incentive issues is contained in Frydman and Wellisz (1991). A more recent discussion of corporate governance and privatization is contained in Frydman and Rapaczynski (1994).

Table 6: Funding Structure of AAA and A firms

	AAA Firms			A Firms		
SOURCE	1990	1991	1992	1990	1991	1992
Working Capital Loans	192.8	115.7	105.1	95.8	56.2	46.9
Investment Loans	35.8	49.3	54.7	25.4	18.4	19.6
Capitalized Interest	0.2	2.5	8.6	1.3	1.8	1.9
Tax Arrears	11.4	10.4	15.7	7.5	15.4	24.0
Interfirm Borrowing	-140.1	-77.8	-84.1	-30.0	8.2	7.6
	100.0	100.0	100.0	100.0	100.0	100.0

The next most important debt holders (in terms of seniority) were commercial banks (cf Table 6, the items Working Capital Loans, Investment Loans and Capitalized Interest). With such a dominant position on the firms' liability side, commercial banks were clearly in a position to exercise control both directly and through their ability to grant or deny new loans. And finally cash-rich enterprises accumulated claims on cash-poor ones through interenterprise arrears (IEAs). In what follows we will investigate control group by control group the extent to which they played an active role in establishing enterprise governance.[11]

[11] Table 6 shows that AAA firms reduced working capital loans but also inter-firm lending (interfirm borrowing = payables minus receivables). Capitalized interest goes up, but so do investment loans (capitalization was permitted only for such loans). Tax arrears go up slightly, but not as a percentage of taxes due. Hence, good firms began monitoring accounts receivable. For A firms, the fall in working capital loans was accompanied by a switch from being an inter firm lender to an inter firm borrower and tax arrears increased threefold.

3.1 *The Government and Corporate Governance*

There is no sign of the government exercising control according to central principles as an equity holder the way for example the Mexican government took control of its state enterprises in 1986. This was probably due to the absence of a centralized treasury function: SOEs that were not yet corporatized remained under the control of their respective line ministries. Corporate control could also have been exercised through other channels, however: we list three. First, the government could through open-ended subsidies or bail-outs have undermined efforts by other claim holders to establish corporate governance. Second, the government through its tax claims became a debt holder and could force adjustment in enterprises; and third, the government could and did set general rules and general incentive schemes to induce responsible enterprise behavior. In the Polish context, the third category consisted of an elaborate scheme to induce wage moderation, the effectiveness of which has been questioned by many (e.g. Coricelli e.a. (1992)).

Subsidies Clearly, unconditional and open-ended subsidies eliminate any chance of other debt holders to control managers since management can simply ask for more subsidies when faced with threats of funding cut-offs by, for example, banks. Thus open-ended subsidies destroy any chance of anybody establishing corporate governance. On this score, Polish performance was exemplary: industrial subsidies were sharply reduced over the period 1989-92 (cf Table 7): what subsidies remained were directed to areas other than manufacturing (e.g., the railways and housing). The absence of open-ended subsidies as a last resort source of funding created the opportunity for other claim holders to exercise control.

Table 7: Government Subsidies to Economic Units

Zloty trillion	1988	1989	1990	1991	1992
Total Expenditure	8.4	29.6	172.2	241.9	381.9
Subsidies	3.3	9.7	32.9	22.0	19.8
Subs/Total Exp. (%)	39	33	19	9	5

Source: GUS Statistical Yearbook 1991 (Table 4 p. 231), 1993 (Table 2 p. 233). Data are not fully comparable because Voivodships (local government authorities) are included from 1991 onwards in the Government Budget data; but the trend is obvious.

Tax Arrears The trade opening in 1990 immediately put pressure on price-cost margins in Polish industry. Type A firms were by and large most affected by import competition and suffered the largest relative price declines as pre-reform prices adjusted to international levels (Pinto e.a. (1993)). And as profits fell, payments discipline disappeared. Table 8 shows the results of a regression linking between enterprise profit margin and tax arrears.

$$TAXARR_i = \alpha + \beta PRF_i + \epsilon_i$$

Table 8

	1990		1991		1992	
	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat
α	0.089	3.473	0.269	5.991	0.229	6.394
β	-0.240	-2.006	-1.205	-4.478	-0.521	-3.240

TAXARR: Tax arrears as a percentage of taxes due;
PRF: profit margin = pre-tax profits/sales.

Table 8 shows how tax arrears were largely a response to sagging profits. With tax arrears available as a way of relieving liquidity shortages, corporate governance was clearly undermined. But this could do only limited damage to imposing hard budget constraints; after all there is a natural limit to tax arrears as an escape from budget constraints: tax arrears cannot exceed tax liabilities. Low profits meant there were no tax liabilities under corporate income tax in the loss making firms; also, loss making firms exercised more wage restraint than profitable firms, so the PPWW liability was limited too; arrears were largely incurred on the minimum asset tax to which Polish SOEs were subject (this tax goes under the name "dividend tax"). So the conclusion is that tax arrears did some damage to corporate governance; but the extent was limited by the fact that tax arrears cannot exceed tax liabilities.

The Popiwek Scheme (PPWW) The PPWW was a tax-based incomes policy based on norms for wage increases (cf Pinto e.a. (1993) and Pinto (1992) for a detailed description). Wage increases in excess of the norm led to tax liabilities that increased sharply with the size of the transgression. The effectiveness of this policy has been questioned by many, partially because of the existence of tax arrears; see Coricelli

e.a. (1992). If the PPWW was in fact incurred but not paid, it obviously would not have a moderating influence on wage settlements that managers granted. Whether the PPWW scheme in fact acted as a break on wage settlements is obviously a hard question to answer categorically; we do not know what wage settlements would have been without this scheme. But the evidence from our survey does not support the critical view of observers like Coricelli e.a. (1992).

Consider first the wage regression presented below (Table 9). The equation estimates quarterly percentage wage increases in excess of permissible percentage norm wage increases (defined exogenously under indexation) as a function of the percentage increase in real value added during the same quarter, the real increase in bank credit to the enterprise granting the wage increase, and, importantly, to the real stock of outstanding PPWW liabilities (proxied by the cumulative excess of the wage bill over the norm since January 1 of the ongoing calendar year upto the start of the quarter, divided by employment to eliminate spurious firm size effects). Significance of the latter variable (labeled LTX /EMPL in the regression) would indicate that the PPWW scheme indeed did contribute to wage restraint. In addition to results for the whole period, Table 9 below splits the sample period into to parts, the break point being 1991.4, when banking reform was introduced (described below during the discussion on banks).

The results are strong. Increases in the available surplus, as measured by the increase in real value added, did not have a significant impact in either period nor in the period as a whole. Increases in the real value of available bank credit gets a positive and significant coefficient in the period prior to the banking reform in 91.4 but switches sign and is almost significant at conventional levels from 1991.4 onwards. This confirms the suspicion often expressed that there was a wage-credit link prior to the banking reforms and is one indication (more will follow in Section 3.2) that banks simply provided relatively open-ended funding before these reforms but tightened up significantly afterwards.

$$(WPC_{it} - WPC^{n}_{it}) = \alpha_i + \beta_1 (\frac{LTX}{EMPL})_{it} + \beta_2 GVAPC_{it} + \beta_3 BBPC_{it} + \epsilon_{it}$$

Table 9

	90.2-92.2		90.2-91.3		91.4-92.2	
	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat
β_1	-7.259	-4.850	-13.909	-4.306	-4.399	-2.258
β_2	0.003	0.437	0.020	1.267	-0.003	-0.364
β_3	0.030	1.645	0.042	2.212	-0.184	-1.918

WPC : growth rate of the quarterly wage bill:
WPC^n : growth rate of the quarterly wage bill according to the PPWW norm:
LTX : cumulative tax liability under the PPWW scheme (cumulated from January 1 of the ongoing calendar year up to the start of the quarter):
EMPL: average employment in current quarter
GVAPC: growth rate of quarterly real gross value added:
BBPC : growth rate of quarterly real bank borrowing.

Most important for the subject of this section are the results on the significance of the PPWW scheme. Outstanding PPWW liabilities exercised a strong negative influence over wage settlements: the coefficient is negative and highly significant both over the whole sample period and over the sub-samples before and after the commercial bank reforms (90.2-91.3 and 91.4-92.2). This contradicts much of the academic discussion on the PPWW (which has to date not made any formal attempt at testing the often strong conclusions on the effectiveness of the PPWW).

The second piece of evidence is of a more qualitative nature. First of all, the firms with the most tax arrears (type A firms) were incurring the least PPWW liabilities since they exercised more wage restraint than more profitable firms, as we saw in Table 5. This undermines the criticism that because of the possibility of going into tax arrears the PPWW had little impact. Not surprisingly, when asked whether removal of the PPWW scheme would lead to higher average wage levels, only 40% of type A firms answered yes and the rest no. Of the type AAA firms, on the other hand, 80% expected higher wages without the PPWW scheme. This difference is understandable given our finding of more wage restraint in type A firms: in a number of them the PPWW liabilities trigger was in fact not reached, leading them to say that removing the trigger would not have made much of a difference. The fact that no less than 80% of type AAA respondents saw the PPWW as an effective constraint strongly suggests that the PPWW did have a moderating impact.

Table 10: By How Much Would You Raise Wages Without The PPWW?

Increase	A (no. of firms)	AAA (no. of firms)
< 5%	1	1
6 -10 %	2	5
11 - 15 %	4	3
16 - 20 %	2	7
20 - 30 %	–	3
> 30 %	–	3

Table 10 quantifies this further. It indicates by how much firms expected wages to raise wages in the absence of the PPWW scheme. The table again indicates that managers saw the PPWW as an effective restraint on wage behavior. The conclusion seems clear: the PPWW did have an impact on wage developments; wage inflation in Poland would have been significantly higher without it.

Summing up The overall assessment is somewhat mixed. There is no indication that the government as shareholder acted directly to change management behavior for the better, and the possibility of tax arrears undermined efforts to impose hard budget constraints. But this damage was limited by the facts that tax arrears cannot exceed tax liabilities and that firms that could, did pay taxes (the more profitable AAA firms). And, most importantly, the government had favorable effects on governance through indirect channels. Most crucial was the stoppage of open-ended subsidies, which would have destroyed any leverage other claimholders might have had. By minimizing subsidies, the government created the possibility for other claimholders to exercise control. And our survey evidence indicates that the other indirect channel through which the government influenced corporate behavior, the PPWW scheme, did lead to significant wage restraint, contrary to common views on this issue.

3.2 *Banks and Corporate Governance*

The Polish banking system has developed with break neck speed. As late as 1988, Poland did

not have a banking system. It was not until 1989 that nine banks were spun off from the National Bank of Poland (Poland's mono bank). These commercial banks were originally regional offices of the communist-era monobank, and were used to dealing with SOEs. There are issues therefore both of banking expertise and established relationships that were bound to impinge on lending decisions. It was very much an open question whether these banks would have the ability to restructure their own portfolios and start playing a constructive role in enterprise transformation and enterprise governance.

The system underwent farreaching reform in the fourth quarter of 1991 when state banks were commercialized with supervisory boards and brought under the control of Ministry of Finance. In October 1991, the MOF forbade lending to some 2000 firms in trouble, many of which were private firms. To check whether the changes in the governance of banks and increased control implemented in the last quarter of 1991 had any impact on their lending behavior, we split up the sample period into two: the nine quarters 89.3-91.3 and the three quarters 91.4-92.2.

The regressions run are designed to answer the question whether lending was demand-driven in response to enterprise losses or whether banks had prospective profitability in mind in allocating their funds over new loans. The first would be a clear signal that banks do not exercise governance; the second case would be a clear signal to loss-making firms that reform is necessary if access to capital markets were to be maintained.

In the first set of regressions we run bank loans (stock of working capital plus investment loans) on the profit margin and on a measure of enterprise cash constraints (cf Annex B for a detailed specification). The cash constraint indicator is designed as a proxy for illiquidity of the bank's clients. The sample is split over time, for the reasons indicated, but all enterprises are pooled.

The results, as summarized in Table 11 and even more so in Table 12, are suggestive. In the first period, prior to governance reform for the banks themselves, loans are strongly linked to losses. The profit margin term has a strongly negative coefficient and is highly significant. Over the early period, bank loans went to firms that were not doing well. This suggests that over this period banks played no role in corporate governance; they simply funded enterprise losses.

$$(\frac{BB}{EMPL})_{it}=\alpha_i+\beta_1 PRF_{it}+\beta_2 CC_{it}+\epsilon_{it}$$

Table 11

		89.3-92.2		89.3-91.3		91.4-92.2	
Firm Type		Estimate	t-stat	Estimate	t-stat	Estimate	t-stat
All	β_1	-0.041	-6.85	-0.030	-5.22	-0.003	-0.65
	β_2	0.00001	0.18	-0.00002	-0.03	-0.00001	-0.68

BB : Real bank borrowing, nominal BB deflated by the sectoral PPI; Quarterly nominal BB was computed by averaging monthly stocks in a quarter.
PRF : Profit margin (Profits over sales).
CC : The cash constraint variable
EMPL: Quarterly employment in a firm.

The story changes after the banking reforms. Running the same regression for the period after the third quarter greatly reduces the size of the coefficient on profits (by a factor 10) and generally produces insignificant coefficients. Clearly the negative link between company profitability and access to new credit breaks down after the 1991.4 governance reform in the commercial banks.

Table 12

		89.3-92.2		89.3-91.3		91.4-92.2	
Firm Type		Estimate	t-stat	Estimate	t-stat	Estimate	t-stat
AAA	β_1	-0.025	-2.04	-0.018	-1.55	0.025	1.99
	β_2	0.007	1.88	0.006	1.76	-0.003	-0.82
A	β_1	-0.051	-6.13	-0.037	-5.60	-0.007	-1.56
	β_2	-0.001	-1.63	-0.0004	-0.63	-0.00003	-0.22

Splitting the sample between type "A" and type "AAA" firms provides further insights on what is going on (cf Table 12). The same break around 91.4 as we saw in the pooled sample shows up here too, but much more pronounced: for type "AAA" firms. the coefficient on profitability switches from significantly negative to significantly positive; this is a clear indication that banks *are starting to exercise governance.* After the governance reforms in the banks. profitability of potential clients apparently began to be used as a signal of creditworthiness rather than as a signal of need. The break is less pronounced for type 'A" firms; the coefficient on profitability in the first half of the sample is highly negative there too and loses its significance and size after 91.4. However it does not switch to significantly positive as in the case of type "AAA" firms.

Similar evidence was obtained from direct survey questions. Managers were asked how difficult access to credit was for the years 1990 and 1991 and the first six months of 1992 (the tail-end of the survey period), with the choice of 6 different answer categories ranging from impossible to very easy. Table 13 lists the results of an ordered logit analysis[12] of the results. The results strongly support the more indirect analysis based on actual loans extended that we just discussed.

[12] A probit based analysis gives very similar results both in terms of size and signs of coefficients and their significance.

Ordinal Logit for 1990, 1991, and 1992.

$$Ease_{it}=\alpha+\beta_1 APRF_{it-1}+\beta_2\left(\frac{ABB}{AEMPL}\right)_{it-1}+\epsilon_i$$

Table 13

	1990		1991		1992	
	Estimate	t stat	Estimate	t stat	Estimate	t stat
β_1	-5.060	-2.196	2.539	0.919	5.771	3.057
β_2	-6.998	-0.306	3.720	0.271	-7.845	-1.166
χ^2_2	3.839		1.290		8.502	

"Ease" : Ease of obtaining credit (scale=1 to 5; 1 most difficult - 5 very easy); groups 0 and 1 were joined to avoid zero cells.
APRF : Profit margin for the whole year.
ABB : Real stock of bank borrowing at the end of the year.
AEMPL: Employment at the end of the year.

When running the equation for 1990, the ease of gaining access to credit was inversely related to profitability, which highlights the bailout function of the financial system immediately after the demise of communism. But already in 1991 the clear negative link between access to credit and profits breaks down: the coefficient actually turns positive although it is not significantly different from zero. But in 1992, following the banking reforms implemented at the end of 1991 whereby the commercial banks were subject to the new governance scheme, the switch is clear: for 1992 profits are positively related to the ease of obtaining credit, and significantly so. An equally interesting result is the complete lack of significance of lagged bank loans: having had access before apparently does not guarantee continued access at all.

Summary All-in-all the econometric analysis of bank lending provides a very definite picture. Banks initially started off playing the role they are usually accused of: uncritical funding of enterprise losses. But the strong governance reform in the Polish banks effected by the Polish finance ministry in the last quarter of 1991 had dramatic results. Come 1992, the econometric evidence strongly supports the view that commercial banks were letting profitability concerns guide their decision on credit allocation. Since banks are the main source of external funds for enterprises because of the unwillingness of the Polish government to extend open-ended subsidies, this development had a major impact on enterprise governance.

3.3 *Inter Enterprise arrears*

Last in the seniority list of creditors are suppliers, i.e. other enterprises. We tested the same type of proxies as were used for the banks. The results are somewhat suggestive but cannot really support any strong conclusion given the quality of the estimates. Profits are a significantly negative factor in explaining inter enterprise arrears, something that should not come as a great surprise. And the cash constraint is not significant in the first period; one interpretation could be that no cash constraints existed over that period. In the second half of the sample the results change somewhat. The cash constraint proxy is now borderline significant; and finally, and somewhat surprisingly, the coefficient on profitability reduces sharply in size although it keeps its "correct" sign, but loses its statistical significance. All-in-all, there is some indication that firms shifted towards using more interenterprise arrears as banks tightened up (recall Table 6); but the econometric evidence is weak.

$$\left(\frac{NP}{EMPL}\right)_{it}=\alpha+\beta_1 PRF_{it}+\beta_2 CC_{it}+\epsilon_{it}$$

Table 14

		89.3-92.2		89.3-91.3		91.4-92.2	
Firm Type		Estimate	t-stat	Estimate	t-stat	Estimate	t-stat
All	β_1	-0.014	-3.04	-0.012	-2.04	-0.002	-0.28
	β_2	-0.00001	-0.28	0.0004	0.71	0.0001	1.88

NP : net payables (= payables minus receivables), i.e., inter-firm borrowing
EMPL: Employment
PRF : Profit margin
CC : Cash Constraint (cf. Annex B).

4 Role Of Managers

In the pre-reform socialist era, a manager's worth depended upon the ability to bargain with government for subsidies and favored allocations of investment and input resources. As the previous section showed, those options were by and large foreclosed following the big bang reform program. Another big change this program led to was the cost-price squeeze as a result of trade liberalization and the fixed exchange rate.[13] SOEs were no longer able to follow "cost plus fixed margin" pricing rules, and were forced to pay attention to efficiency and marketing.

The hardening in the attitude of creditors and government documented in sections 2 and 3 and the compression of margins do not by themselves imply good behavior on the part of SOEs, or more precisely of their managers. Managerial compensation was not designed to encourage managers to maximize the long-run value of the firm. The legislatively-specified link between profits and bonus for

[13] The zloty was devalued substantially to 9500 per dollar on January 1, 1990, at which level it remained for 17 months in spite of inflation of 385 percent during this period. Some of this inflation was due to price-level adjustment as domestic prices drifted up to the quality-adjusted PPP levels implied by this exchange rate and import prices. See Pinto, Coricelli and de la Calle (1990) and Wellisz, Kierzkowski and Okolski (1991).

1991 is shown in Figure 3. which gives managerial bonus as a function of profits before tax minus PPWW. At zero profits. the bonus was zero too; and at S 5 million profits. a manager would receive S2800 for the year. Higher profits than that barely affected the bonus. which asymptotes at $2900 per annum. This weak link creates a pre-disposition towards wage awards; but there is nevertheless ample evidence (see Section 3) of wage restraint.

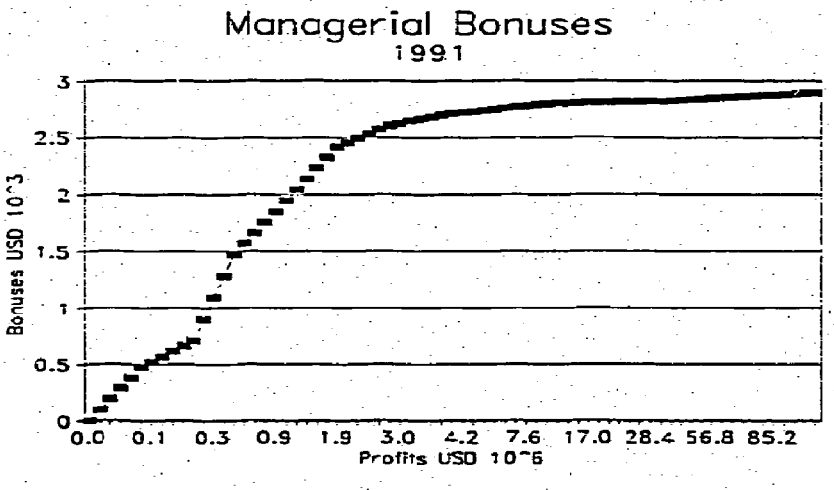

Figure 3: Managerial Bonuses.

Based on the record of Poland's past failed attempts at reform. managers might have concluded that the hard budget was temporary. and that any large crisis in the enterprise sector would lead to a reinstatement of tariffs. In the absence of strong positive incentives towards making the firm profitable, decapitalization through excessive wage claims was a distinct possibility, as many economists feared in 1990. However. the survey evidence below shows that managers believed that the reforms were indeed permanent and that the hard budget constraint and the end to subsidies were going to last. This obviously reduced the incentive for decapitalization; in case they were thinking of running the enterprises down, what would they do next for a living?

Table 15 shows managers' responses to questions on optimism and the credibility of the reforms. These questions were asked in the context of what, in 1992, was believed to be growing optimism among SOE managers about their ability to operate in the new system. Managers were asked to rank specific

factors influencing optimism and the credibility of reforms on a 0-5 scale (0 meaning irrelevant and 5 high significance).

Table 15: Factors Influencing Optimism and Credibility

Optimism	AAA	AA	A
1. Realization that the government will not help spurs SOEs to look for new markets	2.8	3.8	3.7
2. Two years of market experience have boosted self-confidence	3.9	3.4	3.2
Credibility of Reforms	**AAA**	**AA**	**A**
1. Will the government stay the course?			
Yes	24	6	20
No	4	2	3
2. SOEs in trouble not be bailed out with subsidies	3.6	3.7	3.8
3. The fiscal deficit be kept under control	3.8	4.7	3.7

Note: These questions were administered in mid-92. The numbers shown are the average response on a 0-5 scale: 0 meaning irrelevant and 5 meaning highly significant.

The section on optimism in Table 15 shows that A managers, the ones in the deepest trouble, realized that no help would be forthcoming from the government. AAA managers appear to have benefited the most from exposure to market practices. The section on credibility is interesting in that only 9 out of 59 respondents felt that there would be any sort of dilution in reforms. Further, the responses to the undesirability of re-instating subsidies and the importance of controlling the fiscal deficit

are remarkably similar among AAA and A firms, and both are much closer to 5 (highly significant) than 0 (irrelevant). Managers invariably emphasized that unless the deficit were kept low, inflation would go up, making any sort of planning and budgeting very difficult.

But the *negative* penalties associated with the reform - the PPWW, the minimum asset tax (dividend), the compression of margins - were not all that motivated SOEs and managers to respond. Our survey indicates that there was a *positive* side too, captured by the expectation of rewards at the time of privatization. Managers by and large expect privatization, and soon. Only 8 out of 59 responding managers felt they would remain SOEs in the near future; 43 expected privatization soon, 5 expected managerial contracts for restructuring and 3 were already privatized. When asked why they had defied the negative stereotypes associated with state companies and focused on the long-run solvency of the companies, managers would initially mention emotional reasons, patriotism, and the like; but when pressed, they all indicated that they expected financial rewards at the time of privatization, in the form of stock options as well as retaining their jobs as the new CEOs. When directly asked whether they were concerned about establishing their reputations as managers capable of operating in a market environment, the answer was invariably: "obviously".

Thus there seem to have been both carrots and sticks involved in getting managers to improve the performance of their enterprises. On the *stick* side were the hard budget constraints imposed by the Government (elimination of subsidies for manufacturing) and the banks (especially after the reforms of 1991.4); the fierce import competition; and the PPWW tax system. On the *carrot* side were admittedly implicit but apparently still effective positive inducements such as the potential for future cashing in on managerial reputation and the associated financial rewards. This suggests that even the anticipation of future privatization already had positive influence on the performance of state enterprises. This is in striking contradiction to the assumptions made in for example Aghion and Blanchard (1993), where SOE managers consider privatization as the end of their career.

5 Conclusions

The Polish state sector has belied the dire predictions of most outsiders. Privatization was looming ahead and effective enterprise control eliminated after the collapse of the communist central authorities in 1990; in those circumstances, most (present authors included) expected the state sector to be headed for destructive control fights and decapitalization. Instead, state losses have been curbed. SOEs are behind Poland's spectacular export performance in Western markets, and SOEs have made a major contribution to making Poland Europe's fastest growing economy in 1993.

Yet the problems of collapsing central control, lack of effective governance and irrational management incentives were real. So what is it that made the SOEs perform so well nevertheless? And what does it mean for the design of economic reform programs? Rapid privatization was typically recommended because of the very problems highlighted. Should one revisit this view? The answer is an emphatic no: privatization remains as important as was thought before. But the interaction between future privatization and current management incentives in SOEs is much more subtle and less destructive than some (van Wijnbergen (1991), Aghion and Blanchard (1993)) have suggested.

The empirical evidence that we have presented here yields a number of clear conclusions. First, key to the good performance of state industries was an end to open-ended subsidies. Subsidies, rather than helping SOEs adjust, provide them with incentives to continue their past behavior, and, importantly, destroy any mechanism of control that other claim holders might have. Second, commercial banks, the Polish experience shows, can be made to exercise governance over SOEs; but in the absence of effective take over mechanisms, withholding funds is their most powerful instrument. That instrument is made powerless if firms, when faced with adjustment pressure from banks, can simply turn to the government instead. Banks themselves only started to respond this way after their own control/incentive mechanisms had been reformed, in the fourth quarter of 1991, a clear break-point in most of our econometric results. Third, the wage restraint mechanism (the much criticized "Popiwek" scheme) did contribute to wage restraint according to the wage setting equations presented here.

The Government did more. Opening trade forced firms to focus on costs, efficiency and marketing by instantly introducing competition and diluting any monopoly power state firms might have had. The only negative was the Government's lax attitude to tax arrears, which of course also undermines other claim holders' attempts at exercising good governance. The damage that this hole in the hard budget constraint could cause was limited, however; after all tax arrears cannot exceed tax liabilities. Moreover, those tax liabilities are smaller in loss making firms, where the arrears were the most prominent - the profitable AAA firms by and large paid taxes on time.

Thus the Polish Government, although it has not shown signs of exercising control through its shareholder function, did create an environment where other claim holders could insist on adjustment measures. And that is exactly what the most important group among those other claim holders, the commercial banks, started to do once their own incentive and control structure was reformed towards the end of 1991. Before their own control/incentive structure was reformed, banks behaved in the manner described by the typical scathing remarks made about them: they channeled funds to loss makers and generally contributed to soft budget constraints. However, almost immediately after the banking reforms

of the fourth quarter of 1991, their behavior changed radically. Our evidence convincingly shows that from the end of 1991 onwards, the commercial banks re-directed loans to profitable enterprises. As a consequence, profitable enterprises could expand and loss makers were forced to contract. This clearly indicates the tremendous but much overlooked importance of ownership reform in commercial banking in Eastern Europe. The effects of such reforms in Poland have been spectacular.

Our results show more. Enterprise managers indicated their firm belief that privatization was coming. Although privatization plans have been diffuse and their implementation less than decisive, managers expect the process to be inexorably headed towards privatization. Our interviews indicate that this has led them to manage better, not worse: a private sector-based economy means a market for managers and thus a reward to good reputation. Managers indicated that their efforts were among other things inspired by the hope to profit from future privatization, either of the firm they were managing, or of other firms as this would in turn lead to a premium on skilled managers.

Thus the standard advice on the importance of a credible and serious privatization program is in fact right, the surprizingly good performance of the Polish state sector notwithstanding. The subtlety brought up by the Polish experience is that such a program will have a positive pay-off even before its completion: the management of SOEs will improve if managers, by building up a good track record in their SOE, position themselves better in any possible future market for managers, be that inside or outside their firm. And a serious privatization program is the best way of signaling that such a market will come eventually.

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ANNEX A The Survey Sample[14]

The data were collected by actually visiting firms rather than sending questionnaires through the mail or relying on CSO statistics. The sample consisted of 75 large firms scattered all over Poland. The firms were visited in mid-1991 and again in August and September 1992. Information was collected for the three years June 1989 - June 1992, covering six months before and two-and-a-half years into Poland's ETP. This annex describes the sample selection process and the data collected. The enterprises were chosen from the five biggest manufacturing sectors, and are large companies that would usually find a place in the Lista 500 (Poland's *Fortune 500*, the largest companies based on sales); but giants such as URSUS, or the biggest shipyards and steel mills, were excluded.

The companies in the sample incorporate a high degree of product and geographical stratification. They were selected based on 1989 sales. These firms, being large and highly visible, started out with similar initial conditions and bargaining power vis-a-vis the government. Such companies present the most difficult problems in transforming and restructuring state manufacturing because of their size and political sensitivity.

As our focus is on adjustment and its causes, we use the same classification of the 64 SOEs responding to the repeat survey as in Pinto et alii (1993). Early in the ETP, profitability would have been a flawed indicator of performance because various temporary factors - such as paper profits on inventories and implicit input subsidies from CMEA trade - supported the unsustainable profits of 1990. However, by 1992, with such temporary distortions having vanished, profits could be taken as a sign of health and even adjustment.

Accordingly, firms were classified as follows:

AAA- positive retained earnings (= net profit) in January-June 1992
AA - positive pre-tax (= gross) profit in January-June 1992, but negative net profit
A - negative pre-tax (= gross) profit in January-June 1992.[15]

The results were as follows: 31 AAA firms; 8 AA firms; 25 A firms. Tables 1 summarizes the characteristics of these groups. Of the 64 responding firms, 3 were privatized, 24 were commercialized and 37 were still SOEs. Among the 39 AAA and AA companies, 2 were privatized, 14 were commercialized and 23 were SOEs. The least successful A group contained a significant number of commercialized firms, indicating either that more time is needed before a change in governance has an impact; or that a change in governance does not guarantee improved financial performance.

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[14] See Pinto et alii (1993) for more details.

[15] Net profit is retained earnings after paying corporate income tax, the dividend - a misnomer for a minimum asset tax paid to the government - and excess wage tax (PPWW). Gross profit is pre-tax profit. See Pinto et alii (1993) for complete definitions of these terms, which conform to Polish accounting conventions.

Table A. Characteristics of Sample Enterprises

	Category[1]		
Characteristic	A	AA	AAA
Average Sales[2]	55	99	103
Average Employment[3]	3300	2890	2939
Sectoral Origin			
Metallurgy	4	4	5
Electromachinery	5	1	5
Chemicals	2	-	10
Light,	12	-	3
Manufacturing	2	3	8
Food Processing			
Governance	1	-	2
Privatized	10	1	13
Commercialized	14	7	16
State-Owned			
Main Products	Semi-finished steel products, raw steel, processed steel products - small amount, means of passenger road transportation, trailers, machine tools, construction equipment, man made fibers, plastics, hosiery, shoes, textiles, threads, woolen threads, sugar.	Raw and semi-processed steel products, steel pipes, fertilizers, meat products, sugar.	Processed ferrous and non-ferrous products; refrigerators; ovens; heavy engines; transformers; wires and cables; paints and varnishes; tires; fertilizer; floor tiles; finished garments; cigarettes; sweets and chocolates; processed meat.

1 Category is based on financial performance from January-June 1992
2 Average sales are in millions of dollars for 1991
3 Average Employment is measured as of June 1992.

Polish SOEs have been operating with limited or no interference from the Ministry of Industry. They are "self-governing" under the direction of a Workers' Council that hires and fires the manager, determines managerial compensation and clears all important strategic and even operating decisions. As

a rule. SOEs have not received any special treatment or financial subsidy during the ETP. In addition to the rigors of hard budgets and import competition, SOEs have been subject to the dividend, actually a minimum asset tax on the centrally financed share of the company's equity, and the excess wage tax, a penalty on wage increases above specified norms that in 1990 carried a punishing 500% marginal tax rate.

Commercialized companies differ in two ways from SOEs: first, instead of the Workers' Council, there is a Supervisory Board, of which four members are nominated by the Ministry of Privatization (MOP) and two by the employees; second, the enterprise is transferred to the control of the MOP and on paper, must be privatized in two years. Further, commercialized firms were to be exempt from the fixed dividend and pay a percentage of after-tax profits to the Treasury instead; and were to receive a break of 20 percent on excess wage tax payments. These tax breaks induced several SOEs to seek commercialization at the end of 1990; but the tax breaks have proved elusive. The dividend tax rate was reduced from 32 percent in 1990 to 22 percent in 1991 and subsequently to 10 percent in July 1992, while the dividend from commercialized companies was re-assessed as a form of asset tax. The highest marginal excess wage tax rate has been lowered to 300 percent and the capacity to exceed norm wages has diminished along with enterprise profitability and liquidity. The enthusiasm for commercialization has waned along with the tax advantages.

Over our sample period, there is little to choose in practical terms between SOEs and commercialized firms. In well-run SOEs, the *de facto* balance of power has shifted in favor of the manager, not surprising in view of the scarcity of managerial talent in Poland and the rising fear of unemployment. In addition most firms were commercialized in mid-1991, leaving only one year of sample performance, inadequate to trace the impact of commercialization. Therefore, the main text discusses governance more in terms of the role of the government and banks.

ANNEX B Banks and Corporate Governance

Assume wage maximization. This means that the following accounting inequality must hold if tax arrears do not arise:

$$\text{(i)} \qquad (GVA - W - D)(1-t) + D - \delta \geq PPWW.$$

where GVA is gross-value added, W is the wage bill grossed up to include payroll taxes, social insurance, etc., D is depreciation, t is the corporate income tax rate ($t = 40\%$), δ is the dividend (minimum asset tax), and PPWW is the excess wage tax, which depends upon W in relation to the norm wages.

If wages are set to exhaust the surplus, then (i) must hold with equality. This can be re-arranged to give

$$GVA(1-t) + tD - \delta = W(1-t) + PPWW.$$

We can thus use the ratio $(W(1-t) + PPWW)/(GVA(1-t) + tD - \delta)$ as a cash constraint indicator, which is denoted CC. If bank loans are highly correlated with CC, this would indicate budget softness.

The following regression was estimated:

$$BB/EMPL = f(PRF, CC),$$

where BB is bank loans (the stock of working capital plus investment loans deflated by the relevant sectoral PPI), EMPL is employment, a proxy for firm-size, PRF is profit margin and CC is the cash constraint indicator just defined.[16] If the coefficient on CC is positive and that on PRF is negative, this would be overwhelming evidence of soft bank loans; and proof that the really profitable companies did not want to borrow.

[16] The reason for using the stock of loans is two-fold: first, most of the quarterly variation is in working capital loans; second, such loans are essentially short-term loans, renegotiated with the banks every few months.

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